What is claimed is:

1. An information sharing method for holding information owned by at least one unit user on a storage device in a tree structure provided for each unit user, said tree structure including a plurality of nodes sequentially arranged from a home root node to at least one leaf node, such that said information corresponds to each of said nodes, to manage an availability condition of each of said nodes, said method comprising:

a first step in which a computer refers to the availability condition of each of said nodes on said storage device in response to an availability condition manipulation request for changing the availability condition of some node, to determine whether or not said availability condition manipulation request can be executed while satisfying a condition that the number of times of changes in the availability condition is limited to one at maximum on any of paths from said home root node to said respective leaf nodes;

a second step in which said computer executes the availability condition manipulation request such that said condition is satisfied when the availability condition manipulation request is determined as executable in said first step; and

a third step in which said computer refers to said availability condition in response to a tree structure manipulation request for modifying said tree structure, and executes the tree structure manipulation request such that said condition is satisfied.

2. The information sharing method according to claim 1, wherein said first step includes:

when said availability condition manipulation request involves setting an availability condition, determining that said availability condition manipulation request is executable when the availability condition of a node under manipulation is the same as that of the home root node, or is a change start point of the availability condition in said tree structure, and determining that said availability condition manipulation request is not executable when the availability condition of said node under manipulation is different from that of said home root node, and is not said change start point.

3. The information sharing method according to claim 1, wherein said first step includes:

when said availability condition manipulation request involves clearing an availability condition, determining that said availability condition manipulation request is executable when a node under manipulation is a change start point of the availability condition in said tree structure, and determining that said availability condition manipulation request is not executable when said node under manipulation is not said change start point.

4. The information sharing method according to claim 1, wherein said first step includes:

determining that said availability condition manipulation request is not executable when a node under manipulation intended by said availability condition manipulation request is a home root node.

5. The information sharing method according to claim 1, wherein said second step includes:

when said availability condition manipulation request involves setting an availability condition, setting the availability condition of a node under manipulation as requested by said availability condition manipulation request, and setting the same availability condition to all nodes included in a maximum partial tree in which said node under manipulation is in position of a root.

6. The information sharing method according to claim 1, wherein said second step includes:

when said availability condition manipulation request involves clearing availability condition, clearing the availability of a node under manipulation, and setting the same availability condition as that of said node under manipulation to all nodes included in a maximum partial tree in which said node under manipulation is in position of a root.

7. The information sharing method according to claim 1, wherein said third step includes:

when said tree structure manipulation request involves creating a new node, creating said new node at a requested location.

8. The information sharing method according to claim 7, wherein said third step further includes:

setting the same availability condition of a parent node of said new node to said new node after creating said new node.

9. The information sharing method according to claim 1, wherein

said third step includes:

when said tree structure manipulation request involves duplicating a node group comprising at least one node, creating a duplicate of said node group at a requested location.

10. The information sharing method according to claim 9, wherein said third step further includes:

setting the same availability condition set to the parent node of a root node of said node group to said nodes which make up the duplicate of said node group after creating the duplicate of said node group.

11. The information sharing method according to claim 1, wherein said third step includes:

when said tree structure manipulation request involves moving a node group comprising at least one node, moving said node group to a location under a requested destination node.

12. The information sharing method according to claim 11, wherein said third step further includes:

performing different processing depending on the availability condition of each of said nodes included in said node group after moving said node group.

13. The information sharing method according to claim 12, wherein said processing is one of first processing for maintaining the availability condition of each of said nodes included in said node group, second

processing for setting the same availability condition of said destination node to each of said nodes, and third processing for querying a user whether said first processing or said second processing is performed, and performing the one selected by the user.

14. The information sharing method according to claim 11, wherein said third step further includes:

performing different processing depending on whether the availability condition of said destination node is different from that of the home root node after moving said node group.

15. The information sharing method according to claim 14, wherein said processing is one of first processing for maintaining the availability condition of each of said nodes included in said node group, second processing for setting the same availability condition of said destination node to each of said nodes, and third processing for querying a user whether said first processing or said second processing is performed, and performing the one selected by the user.

16. The information sharing method according to claim 14, wherein said third step further includes:

performing different processing depending on the availability condition of each of said nodes included in said node group after moving said node group.

17. The information sharing method according to claim 16, wherein

said processing is one of first processing for maintaining the availability condition of each of said nodes included in said node group, second processing for setting the same availability condition of said destination node to each of said nodes, and third processing for querying a user whether said first processing or said second processing is performed, and performing the one selected by the user.

18. The information sharing method according to claim 1, wherein each of said nodes in said tree structure is classified into an unchanged node having the same availability condition as the home root node, a change start node having an availability condition different from that of said home root node and different from that of a parent node; and a change takeover node having an availability condition different from that of said home root node and the same as that of a parent node, said classification being added to information on said availability condition as a change state type of each of said nodes for management, wherein:

said computer refers to said change state type for examining said availability condition.

19. The information sharing method according to claim 1, wherein said tree structure includes a node which is a short-cut to another node.

20. An information sharing apparatus for holding information owned by at least one unit user on a storage device in a tree structure provided for each unit user, said tree structure including a plurality of nodes sequentially arranged from a home root node to at least one leaf node, such

that said information corresponds to each of said nodes, to manage an availability condition of each of said nodes, said apparatus comprising:

execution possibility determining means, responsive to an availability condition manipulation request for changing the availability condition of some node, for referring the availability condition of each of said nodes on said storage device to determine whether or not said availability condition manipulation request can be executed while satisfying a condition that the number of times of changes in the availability condition is limited to one at maximum on any of paths from said home root node to said respective leaf nodes;

availability condition manipulating means for executing the availability condition manipulation request such that said condition is satisfied when said execution possibility determining means determines that the availability condition manipulation request is executable; and

tree structure manipulating means, responsive to a tree structure manipulation request for modifying said tree structure, for referring to said availability condition to execute the tree structure manipulation request such that said condition is satisfied.

21. The information sharing apparatus according to claim 20, wherein said execution possibility determining means is operative when said availability condition manipulation request involves setting an availability condition to determine that said availability condition manipulation request is executable when the availability condition of a node under manipulation is the same as that of the home root node, or is a change start point of the availability condition in said tree structure, and to determine that said

availability condition manipulation request is not executable when the availability condition of said node under manipulation is different from that of said home root node, and is not said change start point.

22. The information sharing apparatus according to claim 20, wherein said execution possibility determining means is operative when said availability condition manipulation request involves clearing an availability condition to determine that said availability condition manipulation request is executable when a node under manipulation is a change start point of the availability condition in said tree structure, and to determine that said availability condition manipulation request is not executable when said node under manipulation is not said change start point.

23. The information sharing apparatus according to claim 20, wherein said execution possibility determining means determines that said availability condition manipulation request is not executable when a node under manipulation intended by said availability condition manipulation request is a home root node.

24. The information sharing apparatus according to claim 20, further comprising availability condition setting supporting means, when called from said availability condition manipulating means, for setting the same availability condition of a node under manipulation to all nodes included in a maximum partial tree in which said node under manipulation is in position of a root,

wherein said availability condition manipulating means is

operative when said availability condition manipulation request involves setting an availability condition to set the availability condition of a node under manipulation as requested by said availability condition manipulation request, and to call said availability condition setting supporting means.

25. The information sharing apparatus according to claim 20, further comprising availability condition clear supporting means, when called from said availability condition manipulating means, for setting the same availability condition of a node under manipulation to all nodes included in a maximum partial tree in which said node under manipulation is in position of a root,

wherein said availability condition manipulating means is operative when said availability condition manipulation request involves clearing availability condition to clear the availability of a node under manipulation, and to call said availability condition clear supporting means.

26. The information sharing apparatus according to claim 20, wherein said tree structure manipulating means is operative when said tree structure manipulation request involves creating a new node to create said new node at a requested location.

27. The information sharing apparatus according to claim 26, further comprising new node creation supporting means, when called from said tree structure manipulating means, for setting the same availability condition of a parent node to said new node,

wherein said tree structure manipulating means calls said new

node creation supporting means after creating said new node.

28. The information sharing apparatus according to claim 20, wherein said tree structure manipulating means is operative when said tree structure manipulation request involves duplicating a node group comprising at least one node to create a duplicate of said node group at a requested location.

29. The information sharing apparatus according to claim 28, further comprising duplication supporting means, when called from said tree structure manipulating means, for setting the same availability condition set to the parent node of a root node of said node group to said nodes which make up the duplicate of said node group,

wherein said tree structure manipulating means calls said duplication supporting means after creating the duplicate of said node group.

30. The information sharing apparatus according to claim 20, wherein said tree structure manipulating means is operative when said tree structure manipulation request involves moving a node group comprising at least one node to move said node group to a location under a requested destination node.

31. The information sharing apparatus according to claim 30, further comprising movement supporting means, when called from said tree structure manipulating means, for performing different processing depending on the availability condition of each of said nodes included in said node

group,

wherein said tree structure manipulating means calls said movement supporting means after moving said node group.

32. The information sharing apparatus according to claim 31, wherein said processing performed by said movement supporting means is one of first processing for maintaining the availability condition of each of said nodes included in said node group, second processing for setting the same availability condition of said destination node to each of said nodes, and third processing for querying a user whether said first processing or said second processing is performed, and performing the one selected by the user.

33. The information sharing apparatus according to claim 31, wherein said movement supporting means further performs different processing depending on the availability condition each of said nodes included in said node group.

34. The information sharing apparatus according to claim 33, wherein said processing performed by said movement supporting means is one of first processing for maintaining the availability condition of each of said nodes included in said node group, second processing for setting the same availability condition of said destination node to each of said nodes, and third processing for querying a user whether said first processing or said second processing is performed, and performing the one selected by the user.

35. The information sharing apparatus according to claim 20, wherein each of said nodes in said tree structure is classified into an unchanged node having the same availability condition as the home root node, a change start node having an availability condition different from that of said home root node and different from that of a parent node; and a change takeover node having an availability condition different from that of said home root node and the same as that of a parent node, said classification being added to information on said availability condition as a change state type of each of said nodes for management, wherein:

said information sharing apparatus refers to said change state type for examining said availability condition.

36. The information sharing apparatus according to claim 20, further comprising short-cut managing means for creating a node which is a short-cut to a referenced node, said short-cut managing means being responsive to designation of said short-cut node for searching said referenced node.

37. An information sharing program for causing a computer to hold information owned by at least one unit user on a storage device in a tree structure provided for each unit user, said tree structure including a home root node, at least one leaf node, and a plurality of nodes sequentially arranged from the home root node to each leaf node, such that said information corresponds to each of said nodes, to manage an availability condition of each of said nodes, said information sharing program

comprising:

first processing for referring to the availability condition of each of said nodes on said storage device in response to an availability condition manipulation request for changing the availability condition of some node, to determine whether or not said availability condition manipulation request can be executed while satisfying a condition that the number of times of changes in the availability condition is limited to one at maximum on all paths from said home root node to said respective leaf nodes;

second processing for executing the availability condition manipulation request such that said condition is satisfied when the availability condition manipulation request is determined as executable in said first processing; and

third processing for referring to said availability condition in response to a tree structure manipulation request for modifying said tree structure, and executing the tree structure manipulation request such that said condition is satisfied.